

Do Now:

What types of light bulbs do you use in your home?

# Sources of Man Made Light



# Types of Light bulbs - Incandescent



- Electrons flow through a filament and create heat.
- Light produced when filament glows.
- Filaments are made of tungsten
- Most of the energy in the bulb is lost as heat. (homes)

# Fluorescent



- Tubes are filled with mercury vapor
- Electrons hit the mercury, emit UV rays, collide with the phosphorous coating inside the tube and emit light.
- Most of the energy is emitted as light. (efficient) Homes

# Laser



- Light is emitted when atoms emit photons
- A laser beam does not spread out like other light sources. It is more of a pinpoint light beam
- Fiber optics, surgery

# Neon



- Electrons move through a gas in a tube
- Gases used are neon, argon, helium, or krypton
- Each gas produces its own color of light.
- Advertising

# Sodium Vapor



- Contain neon, argon gas and solid sodium
- Electrons cause the sodium to turn to vapor and mix with the argon and neon gases in the tube
- Very bright light
- Security or gym lighting

# Halogen



- Electrons flow through a tungsten filament like the incandescent bulb
- Iodine, bromine, or fluorine gas in the bulb helps reduce the wear on the filament
- The bulb is also made of quartz for strength.
- Auto headlights



# Spectroscope

- An instrument that allows you to see the different colors of light produced by each type of bulb

